

### REMARKS

Applicant has amended claims 5, 9, and 21 to clarify that calcium acetylacetonate and zinc acetylacetonate are  $\beta$ -diketone salts and within the description of constituent (c) in the claims. This is consistent with the specification, e.g., on pages 10-11 (paragraphs [0049]-[0053] of the published application (US 2007/0293612)). Applicant has also amended claim 8 to make it consistent with claim 6 and claim 7 to make it consistent with the other pending claims. Applicant respectfully requests entry of these amendments.

Claims 1-11, 14-19, 21, 23-26 and 29-30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Reith *et al.* (WO 99/55777). As stated throughout the Office Action, these claims have been rejected because calcium acetylacetonate and zinc acetylacetonate recited in claims 5, 9 and 21 have been treated as an additional component (d) and not part of component (c). Applicant has amended these claims to make it clear that calcium acetylacetonate and zinc acetylacetonate as  $\beta$ -diketone salts are actually part of component (c). As discussed below and in Applicant's amendment filed April 2, 2008, Reith does not disclose or suggest stabilizer compositions that include "at least one  $\beta$ -diketone, salt of a  $\beta$ -diketone or a mixture thereof" in the amounts provided in the present claims.

Claim 1 of the present application recites a stabilizer composition for stabilizing a halogen-containing thermoplastic resin, comprising:

- (a) calcium hydroxide, calcium oxide or a mixture thereof,
- (b) at least one hydroxyl group-containing isocyanurate, and
- (d) at least one  $\beta$ -diketone, salt of a  $\beta$ -diketone or a mixture thereof, wherein the weight content of constituent (c) is less than 0.3 phr.

Reith discloses a stabilizer composition comprising calcium hydroxide and/or calcium oxide and a hydroxyl group-containing isocyanurate (see claim 1). In referring to the English language equivalent of Reith (US 2003/0209696), at paragraph [0030], linear or cyclic  $\beta$ -ketoesters and/or  $\beta$ -diketones and/or metal salts thereof may be included in the composition. In examples A4 to A6 and B4 to B9, Reith discloses compositions that include calcium hydroxide

and THEIC (as a hydroxyl group-containing isocyanurate). Further, in these examples,  $\beta$ -diketones or salts thereof are included in the compositions.

Reith does not disclose or suggest a stabilizer composition having a weight content of constituent (c) of less than 0.3 phr. The Office Action states in the paragraph bridging pages 2 and 3 that Reith's examples include component (c) in an amount of 0.2 parts by weight. In doing so, the Office only appears to be considering the benzoyl stearoyl methane, which is present in an amount of 0.2 phr. Nevertheless, calcium acetyl acetonate is also a  $\beta$ -diketone and is present in an amount of 0.3 phr. Thus, the total amount of  $\beta$ -diketones is 0.5 phr. This value is significantly above the maximum value of 0.3 phr recited in claim 1. Accordingly, claim 1 and the claims dependent thereon are not anticipated by Reith. Furthermore, Reith provides no teaching or suggestion for modifying the  $\beta$ -diketone amount to be less than 0.3 phr.

Independent claim 6 of the present application recites a stabilizer composition for a halogen-containing thermoplastic resin wherein constituent (c) is present in an amount of 0.01 to 1.728 % by weight, based on the total weight of the stabilizer composition. In referring to the total weight of the stabilizer composition, the amount of thermoplastic resin which is stabilized is not added to the total weight. The amounts of constituent (c) that are present in Reith's examples are above 1.728% by weight, based on the total weight of the stabilizer composition. For example, in example B4, the total amount of additives is 19.9 phr and the total amount of  $\beta$ -diketones is 0.5 phr. Constituent (c) is thus present in an amount of 2.513% by weight, based on the total weight of the stabilizer composition. For the other examples, similar results are obtained. All the values are significantly above 1.728% by weight because the total amount of  $\beta$ -diketones is 0.5 phr and the total amount of stabilizer composition only varies slightly. Therefore, claim 6 and the claims dependent thereon are not anticipated by Reith. Furthermore, Reith provides no teaching or suggestion for modifying the  $\beta$ -diketone amount to less than 1.728% by weight, based on the total weight of the stabilizer composition.

Claims 12, 20 and 31 stand rejected under 35 U.S.C. § 103 as being unpatentable over Reith in view of Adams *et al.* (US 2003/0158311). Claims 13, 22 and 32 stand rejected under 35 U.S.C. § 103 as being unpatentable over Reith in view of Fokken *et al.* (WO 02/098964). Applicant respectfully submit that independent claims 1 and 6 and the claims dependent thereon

are novel and non-obvious in view of Reith for the reasons provided above. Applicant respectfully submits that Adams and Fokken do not overcome the deficiencies in Reith's teachings with regard to the subject matter of the present claims. Therefore, Applicant respectfully requests that the obviousness rejections be withdrawn.

The cited references do not disclose or suggest the preparation of stabilizer compositions with components (a), (b) and (c) of claim 1 or 6 of the present application, wherein the weight content of  $\beta$ -diketones or salts thereof is within the ranges provided in claim 1 or 6. As shown in Examples A1 to A18, the inventors have demonstrated the improvement of properties for compositions within claim 1 or 6. In fact, Example A1 is a comparative example based on Example A4 from Reith. Independent claims 14 and 23-26 also include the ranges from claims 1 and 6 and are also patentable over the cited references. Therefore, the present claims are novel and non-obvious over the cited references.

In view of the foregoing amendments and remarks, Applicant submits that the pending claims are in condition for allowance. Applicant respectfully requests that the claims be allowed to issue. If the Examiner wishes to discuss the application or the remarks provided herein, the Examiner is urged to contact the undersigned.

Applicant notes that an Information Disclosure Statement (IDS) is being provided concurrently with this response. Applicant respectfully requests that the document provided in the IDS be considered by the Examiner prior to issuing further actions related to this application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

Applicant : Walter Reith  
Serial No. : 10/579,270  
Filed : March 12, 2007  
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therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 06-1050.

Respectfully submitted,

Date: December 24, 2008

/Andrew T. Meunier/  
Andrew T. Meunier  
Reg. No. 40,726

1180 Peachtree Street, N.E., 21st Floor  
Atlanta, GA 30309  
Telephone: (404) 892-5005  
Facsimile: (877) 769-7945

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